

Aircraft Manufacturer British Aerospace

Aircraft Engine Manufacturer Rolls-Royce (Spey MK 512-14)

No. of Engines 2 Engine Rating 12,000 lb

Min. T/O Wt. 61.8 k-lb \* Min. T/O Dist. @ Min. T/O Wt. 3,300 ft

\* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 104.5 k-lb Max. T/O Wt. War-Time 104.5 k-lb

\* Min. T/O Dist. @ Max. T/O Wt. War-Time 8,850 ft

\* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 60.8 k-lb Max. Ldg. Wt. 87.0 k-lb

\* Min. Ldg. Dist. @ Min. Ldg. Wt. 3,900 ft

\* Min. Ldg. Dist. @ Max. Ldg. Wt. 4,800 ft

\* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	High		Medium	Low	Ultra Low	High		Low
	A	B	C	D	A	B	C	D
61	18	19	20	21	15	16	18	20
87	27	29	30	31	24	25	28	30
105	33	35	36	38	29	31	34	36

Figure A-442. B.A.C. One-Eleven Model 500

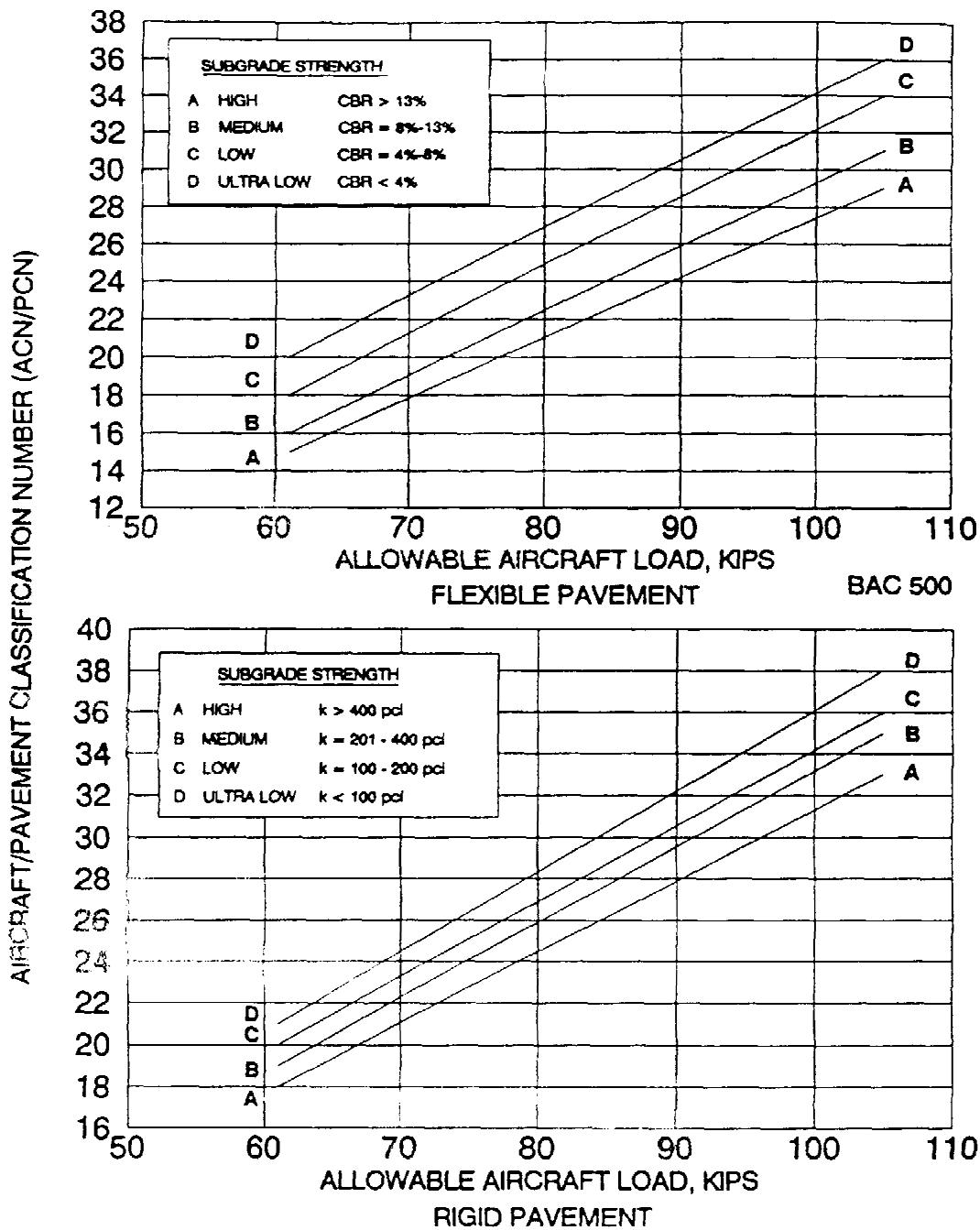


Figure A-443. B.A.C. One-Eleven Model 500, ACN/PCN Curves

Aircraft Manufacturer British Aircraft/Vickers

Aircraft Engine Manufacturer Rolls-Royce (Conway RCo. 42)

No. of Engines 4 Engine Rating 21,000 lb

Min. T/O Wt. 185.7 k-lb \* Min. T/O Dist. @ Min. T/O Wt. †

\* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 312.0 k-lb Max. T/O Wt. War-Time 312.0 k-lb

\* Min. T/O Dist. @ Max. T/O Wt. War-Time 8,280 ft

\* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 200.3 k-lb Max. Ldg. Wt. 216.0 k-lb

\* Min. Ldg. Dist. @ Min. Ldg. Wt. †

\* Min. Ldg. Dist. @ Max. Ldg. Wt. 6,380 ft

\* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	High A	Medium B	Low C	Low D	High A	Medium B	Low C	Very Low D
200	21	24	28	33	24	26	30	39
216	23	26	32	37	26	29	34	44
312	33	42	52	60	41	46	56	71

Figure A-444. B.A.C./Vickers VC-10, Model 1100

27 Sep 91

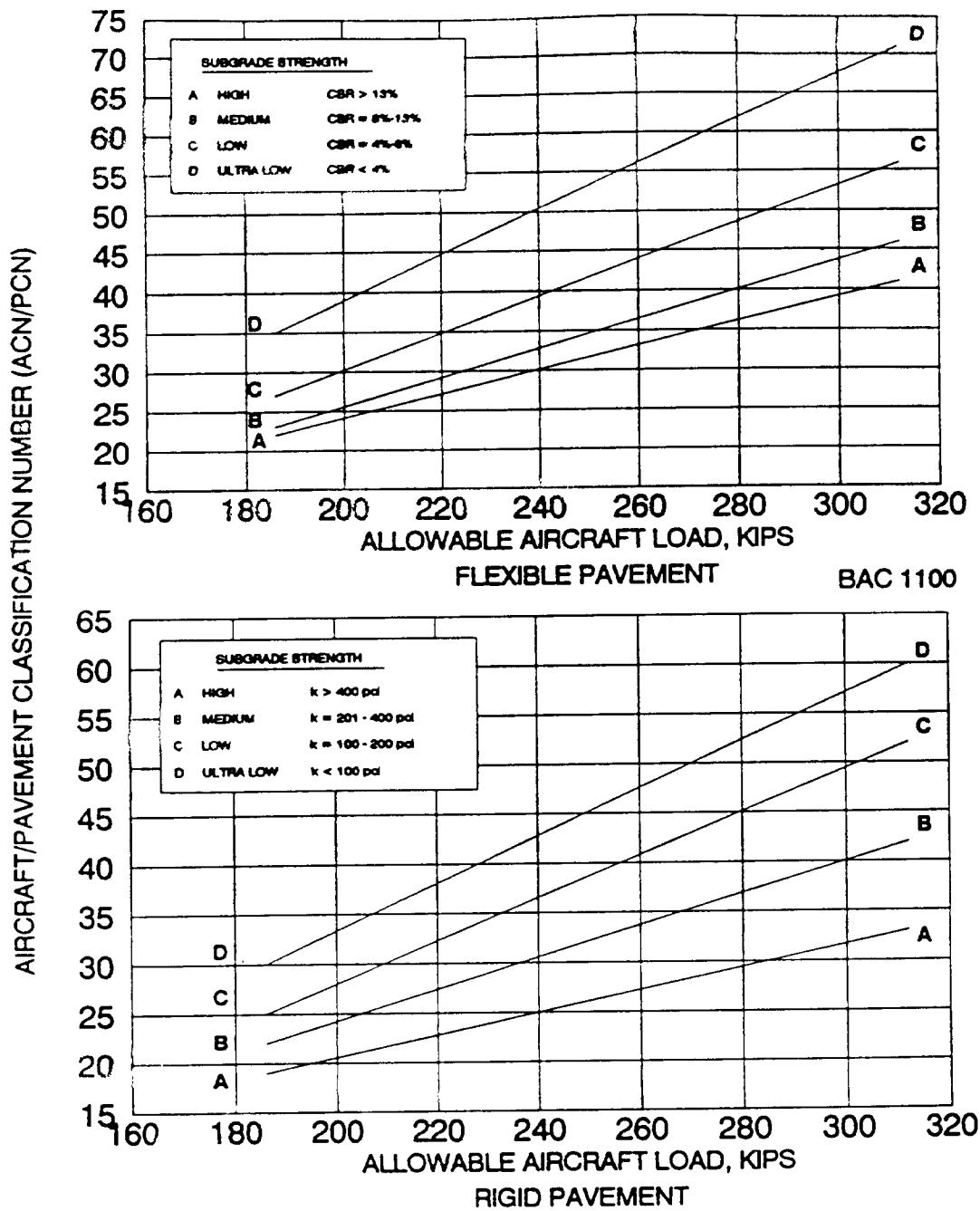


Figure A-445. B.A.C./Vickers VC-10 (Model 1100), ACN/PCN Curves

Aircraft Manufacturer British Aircraft/Vickers

Aircraft Engine Manufacturer Rolls-Royce (Conway RCo. 43)

No. of Engines 4 Engine Rating 22,500 lb

Min. T/O Wt. 196.4 k-lb \* Min. T/O Dist. @ Min. T/O Wt. †

\* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 335.0 k-lb Max. T/O Wt. War-Time 335.0 k-lb

\* Min. T/O Dist. @ Max. T/O Wt. War-Time 8,300 ft

\* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 229.0 k-lb Max. Ldg. Wt. 237.0 k-lb

\* Min. Ldg. Dist. @ Min. Ldg. Wt. †

\* Min. Ldg. Dist. @ Max. Ldg. Wt. 7,000 ft

\* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

#### ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
229	25	29	34	40	28	31	38	48
237	26	30	36	42	29	32	39	50
335	38	46	56	65	44	50	61	77

Figure A-446. B.A.C./Vickers VC-10, Model 1150

27 Sep 91

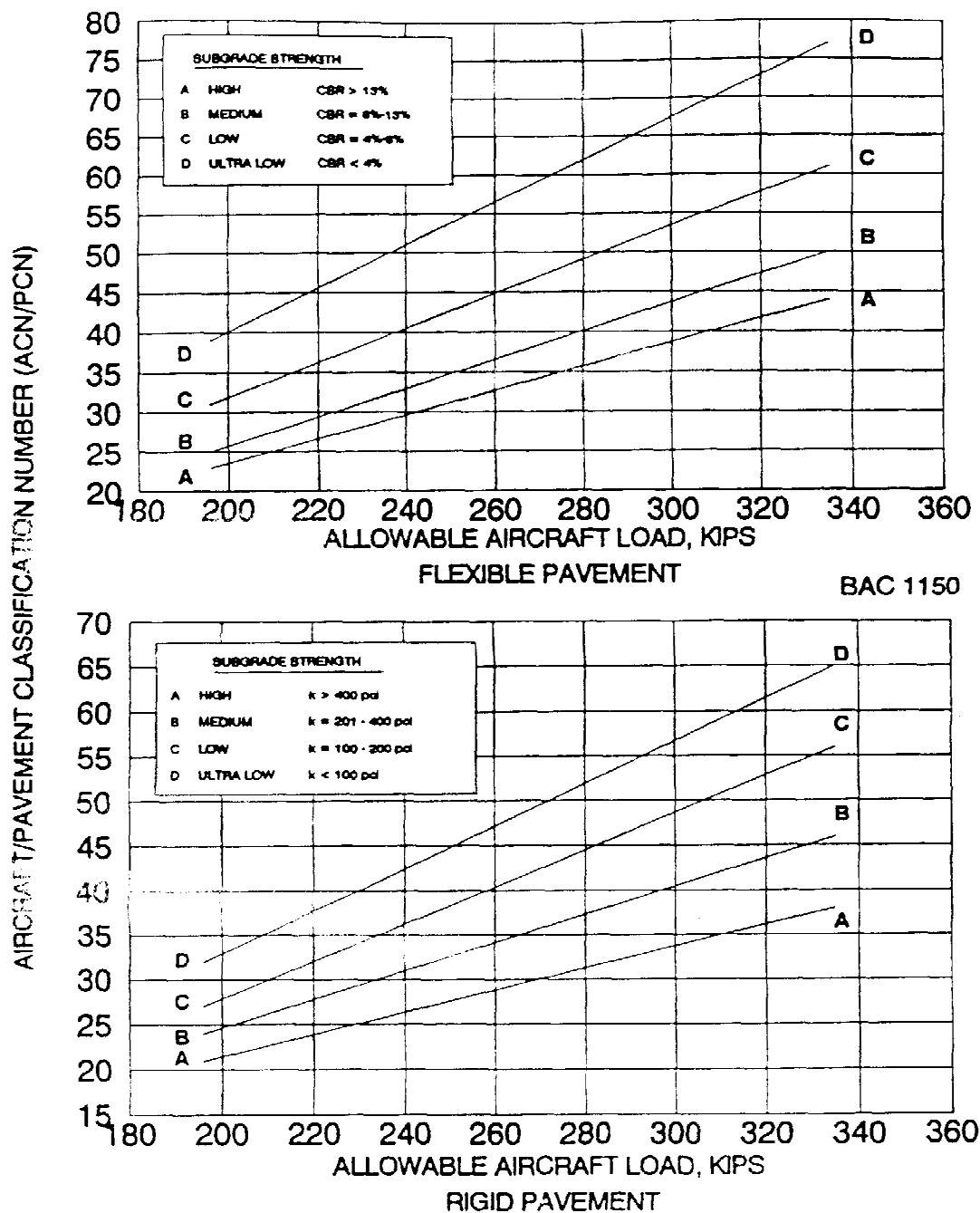


Figure A-447. BAC/Vickers VC-10 (Model 1150), ACN/PCN Curves

Aircraft Manufacturer Ilyushin

Aircraft Engine Manufacturer Kuznetsov (NK-8-4)

No. of Engines 4 Engine Rating 23,150 lb

Min. T/O Wt. 200.6 k-lb \* Min. T/O Dist. @ Min. T/O Wt. †

\* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 357.2 k-lb Max. T/O Wt. War-Time 357.2 k-lb

\* Min. T/O Dist. @ Max. T/O Wt. War-Time 10,660 ft

\* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 222.0 k-lb Max. Ldg. Wt. 231.5 k-lb

\* Min. Ldg. Dist. @ Min. Ldg. Wt. †

\* Min. Ldg. Dist. @ Max. Ldg. Wt. 9,190 ft

\* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

#### ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades				Very Low D	
	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C			
222	28	31	35	39	28	30	34	42		
232	30	33	37	41	29	31	36	45		
357	47	54	62	70	48	52	61	76		

Figure A-448. Ilyushin IL-62

27 Sep 91

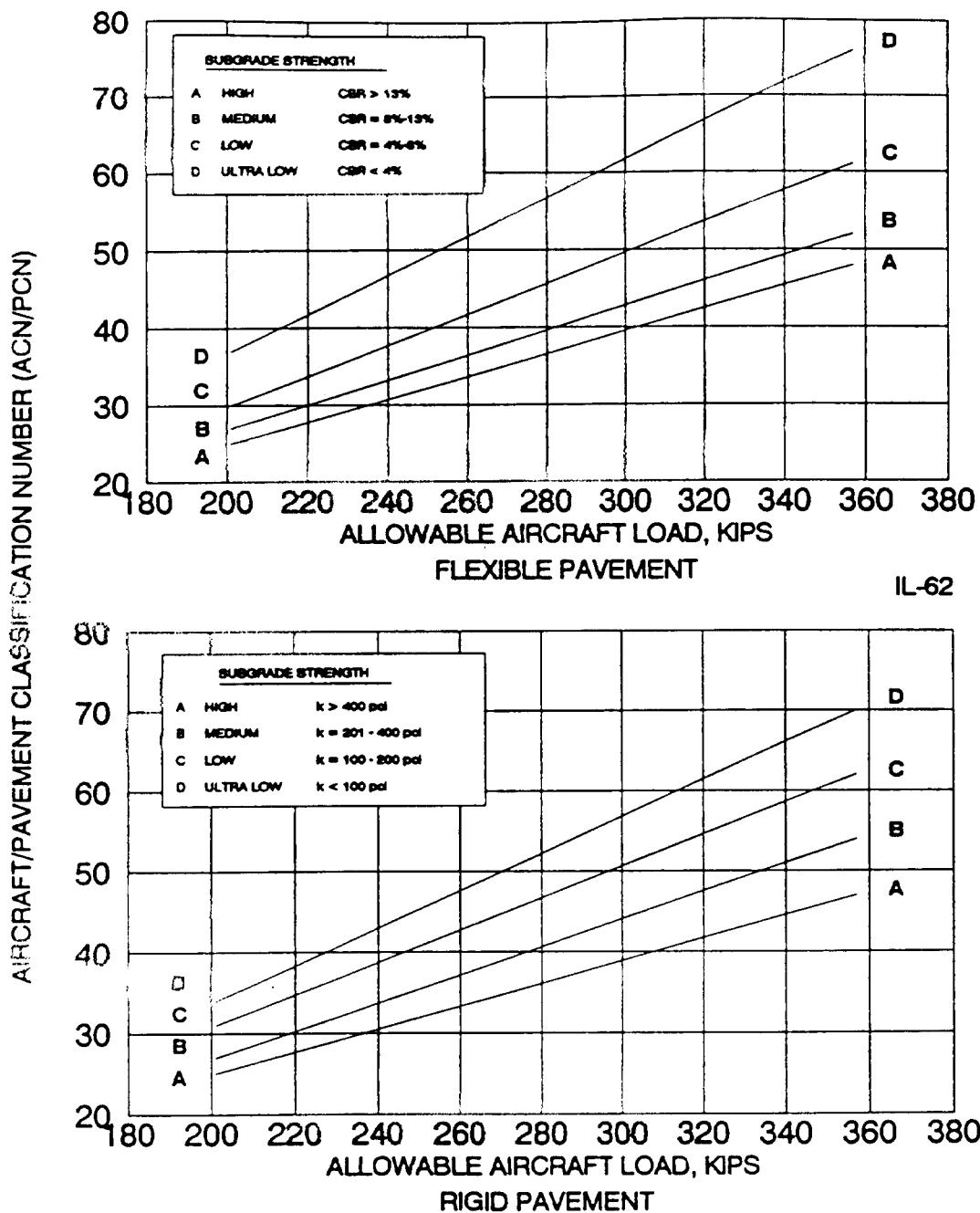


Figure A-449. Ilyushin IL-62, ACN/PCN Curves

Aircraft Manufacturer Airbus

Aircraft Engine Manufacturer General Electric (CF6-50C)

No. of Engines 2 Engine Rating 51,000 lb

Min. T/O Wt. 210.3 k-lb \* Min. T/O Dist. @ Min. T/O Wt. †

\* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 313.1 k-lb Max. T/O Wt. War-Time 313.1 k-lb

\* Min. T/O Dist. @ Max. T/O Wt. War-Time 5,750 ft

\* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 280.4 k-lb Max. Ldg. Wt. 295.4 k-lb

\* Min. Ldg. Dist. @ Min. Ldg. Wt. †

\* Min. Ldg. Dist. @ Max. Ldg. Wt. 4,800 ft

\* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

#### ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades				Very Low D	
	High A		Medium B		Ultra Low D		High A			
	High A	Medium B	Low C	Low D	High A	Medium B	Low C	Low D		
280	32	38	46	52	34	39	47	60		
295	34	41	49	56	37	42	51	65		
313	37	44	52	60	40	45	55	70		

Figure A-450. Airbus A300B2

27 Sep 91

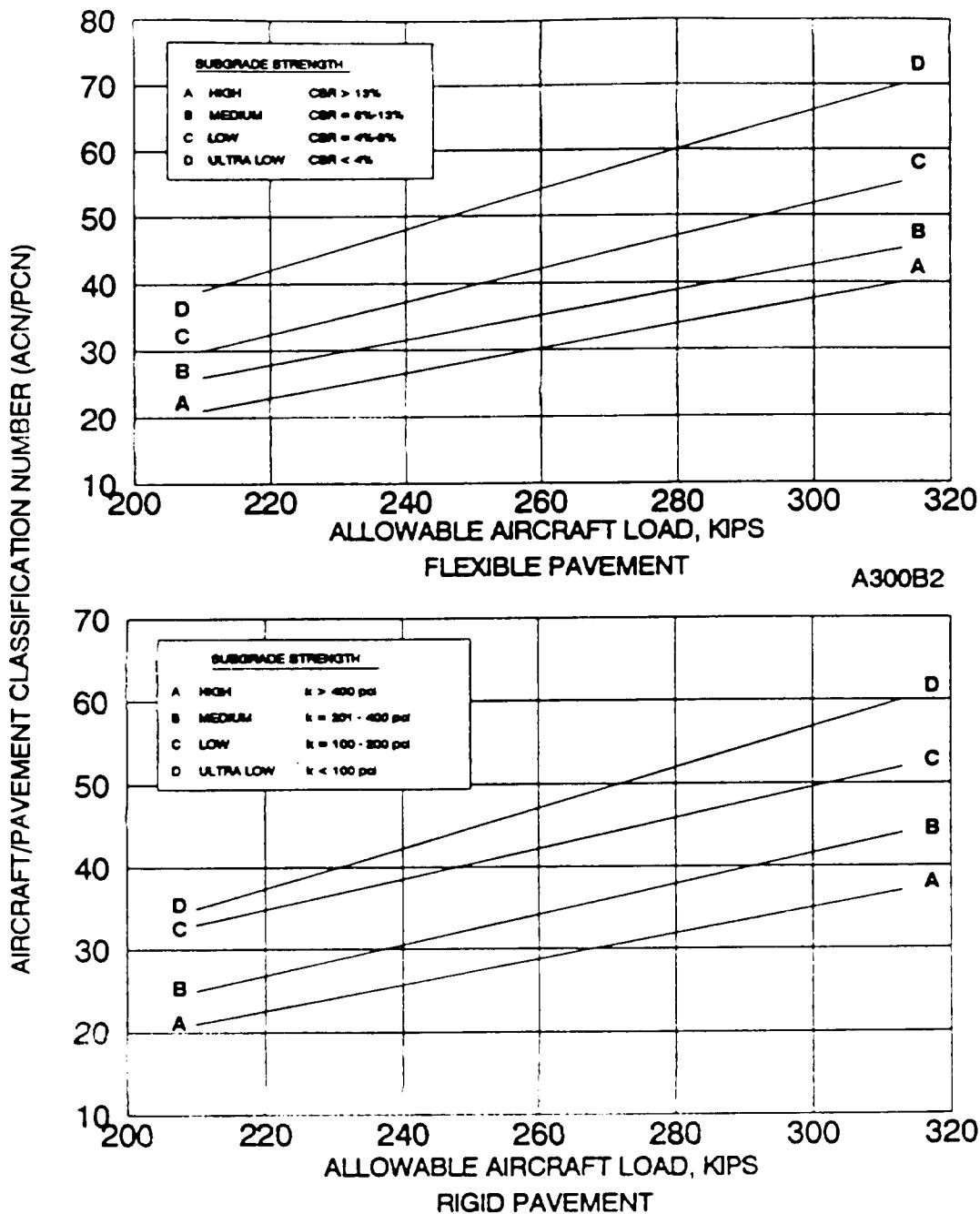


Figure A-451. Airbus A300B2, ACN/PCN Curves

Aircraft Manufacturer Airbus

Aircraft Engine Manufacturer General Electric (CF6-50C2)

No. of Engines 2 Engine Rating 52,500 lb

Min. T/O Wt. 222.7 k-lb \* Min. T/O Dist. @ Min. T/O Wt. †

\* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 363.8 k-lb Max. T/O Wt. War-Time 363.8 k-lb

\* Min. T/O Dist. @ Max. T/O Wt. War-Time 9,750 ft

\* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 282.6 k-lb Max. Ldg. Wt. 295.4 k-lb

\* Min. Ldg. Dist. @ Min. Ldg. Wt. †

\* Min. Ldg. Dist. @ Max. Ldg. Wt. 4,900 ft

\* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
					Very			
	High A	Medium B	Low C	Low D	High A	Medium B	Low C	Low D
283	34	40	47	54	36	40	48	62
295	36	42	50	57	38	42	50	65
364	47	56	65	73	49	54	66	84

Figure A-452. Airbus A300B4

27 Sep 91

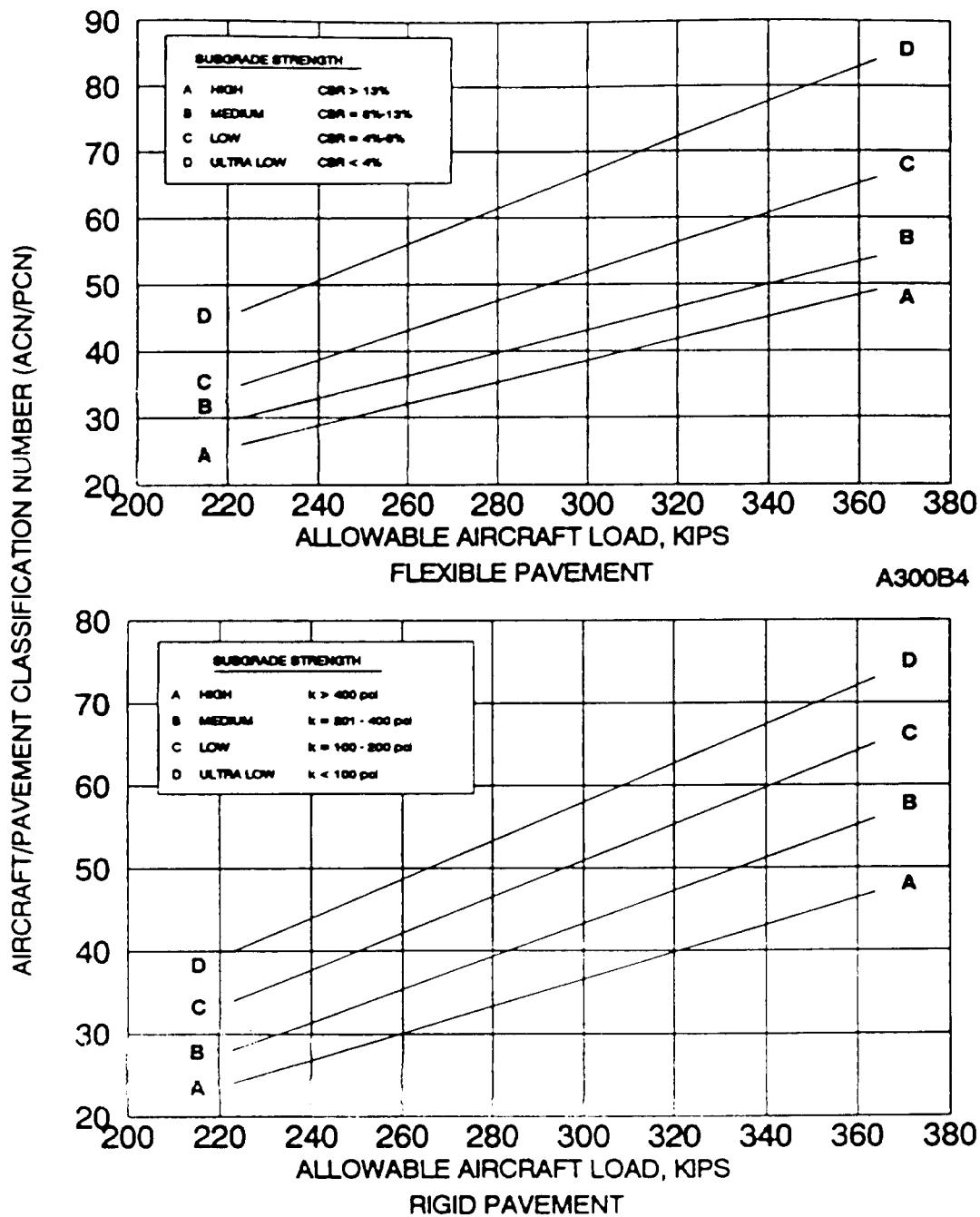


Figure A-453. Airbus A300B4, ACN/PCN Curves

Aircraft Manufacturer Airbus

Aircraft Engine Manufacturer Pratt and Whitney (PW4156)

No. of Engines 2 Engine Rating 56,000 lb

Min. T/O Wt. 219.9 k-lb \* Min. T/O Dist. @ Min. T/O Wt. †

\* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 363.8 k-lb Max. T/O Wt. War-Time 363.8 k-lb

\* Min. T/O Dist. @ Max. T/O Wt. War-Time 7,650 ft

\* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 296.4 k-lb Max. Ldg. Wt. 304.2 k-lb

\* Min. Ldg. Dist. @ Min. Ldg. Wt. †

\* Min. Ldg. Dist. @ Max. Ldg. Wt. 5,040 ft

\* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades				Very Low D
	High A		Medium B	Low C	High A		Medium B	Low C	
	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Low D	
296	36	42	49	55	39	44	51	62	
304	37	43	51	57	41	46	53	64	
364	47	56	65	73	52	58	66	80	

Figure A-454. Airbus A300-600

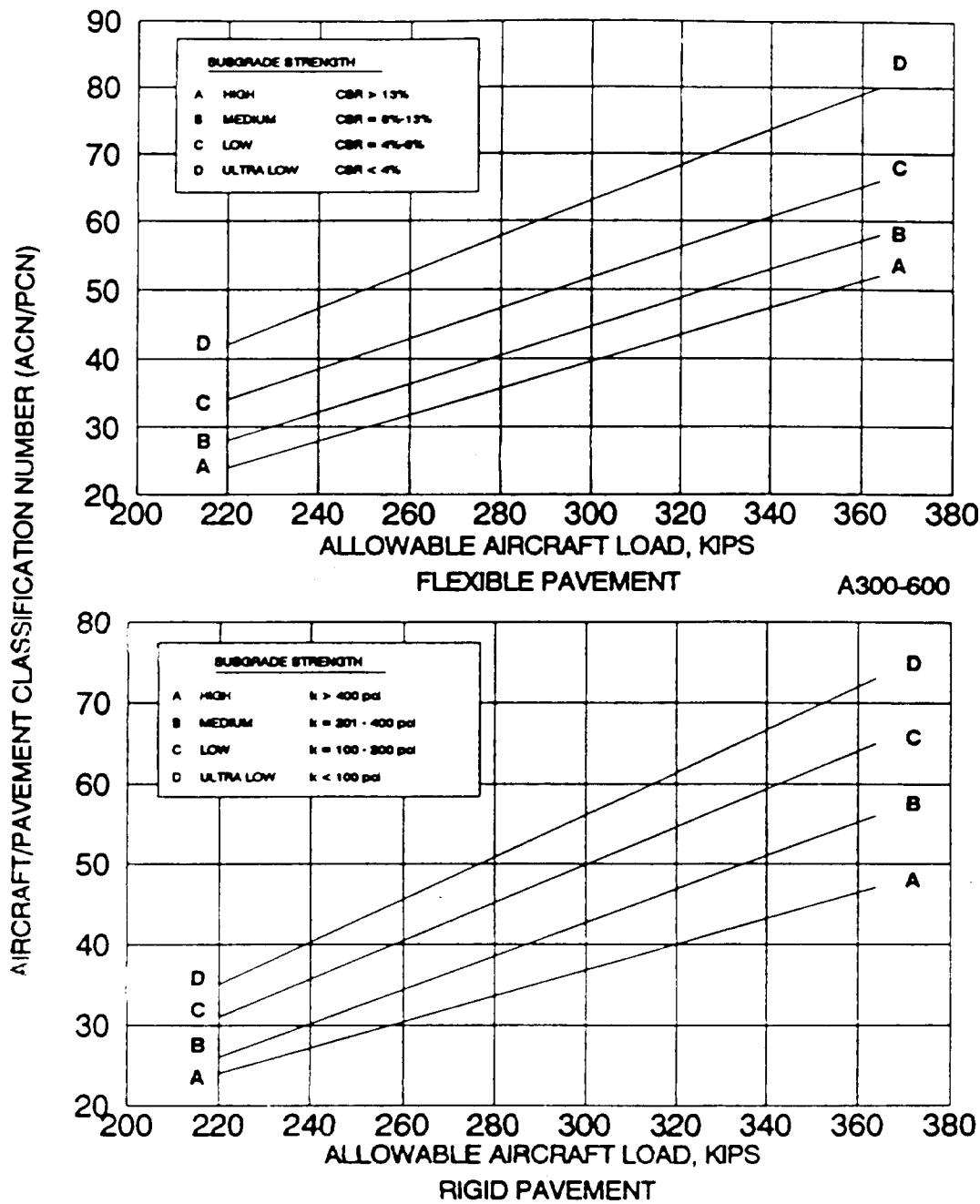


Figure A-455. Airbus A300-600, ACN/PCN Curves

Aircraft Manufacturer Airbus

Aircraft Engine Manufacturer Pratt and Whitney (PW4152)

No. of Engines 2 Engine Rating 52,000 lb

Min. T/O Wt. 198.5 k-lb \* Min. T/O Dist. @ Min. T/O Wt. †

\* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 346.1 k-lb Max. T/O Wt. War-Time 346.1 k-lb

\* Min. T/O Dist. @ Max. T/O Wt. War-Time 7,300 ft

\* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 261.0 k-lb Max. Ldg. Wt. 273.4 k-lb

\* Min. Ldg. Dist. @ Min. Ldg. Wt. †

\* Min. Ldg. Dist. @ Max. Ldg. Wt. 5,100 ft

\* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	High		Medium	Low	Ultra Low	High		Low
	A	B	C	D	A	B	C	D
261	26	32	39	46	32	34	42	56
273	28	34	41	48	35	38	48	63
346	36	46	56	66	45	50	62	82

Figure A-456. Airbus A310-300

27 Sep 91

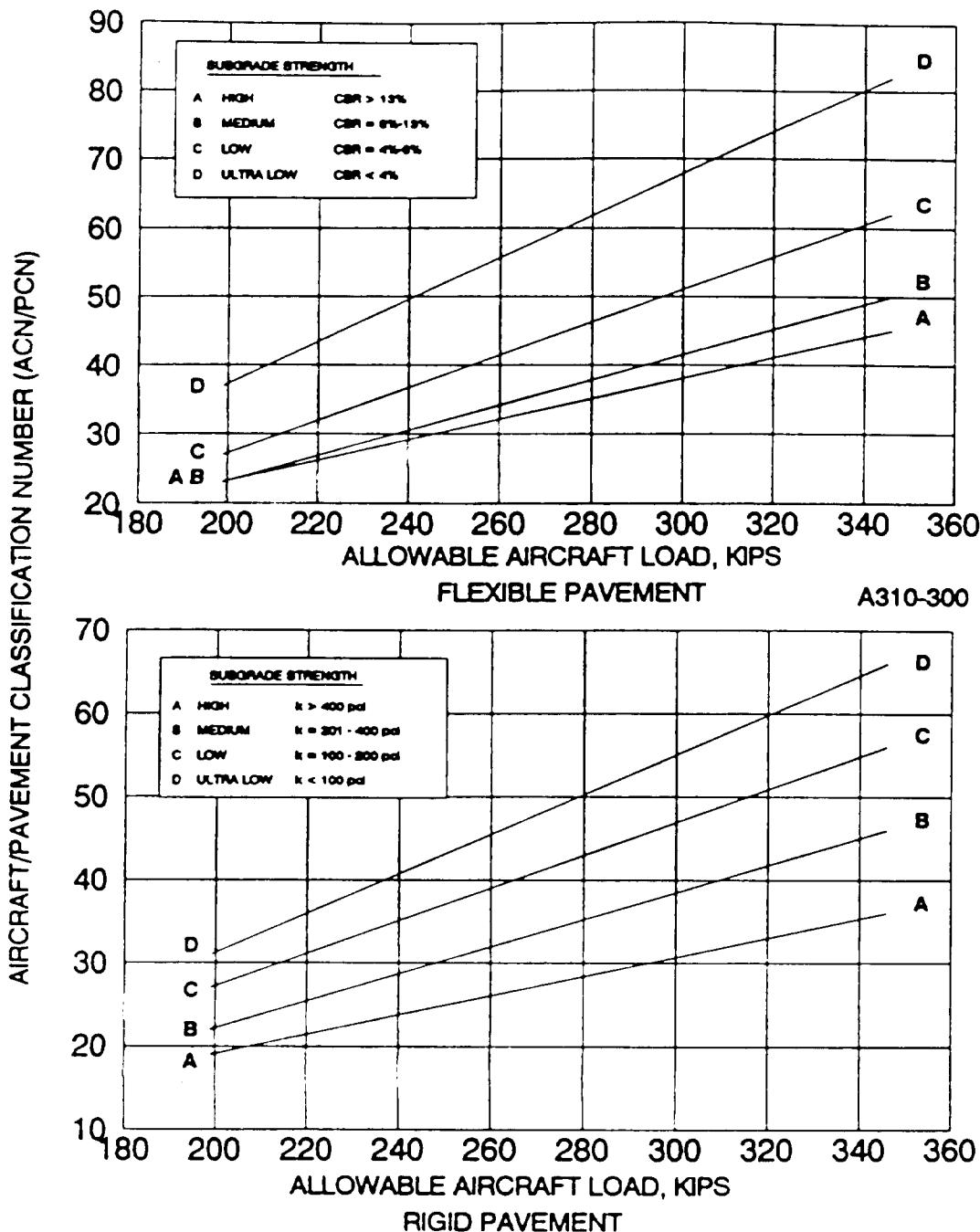


Figure A-457. Airbus A310-300, ACN/PCN Curves

Aircraft Manufacturer Airbus

Aircraft Engine Manufacturer CFM International (CFM56-5-A1)

No. of Engines 2 Engine Rating 25,000 lb

Min. T/O Wt. 97.0 k-lb \* Min. T/O Dist. @ Min. T/O Wt. †

\* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 158.7 k-lb Max. T/O Wt. War-Time 158.7 k-lb

\* Min. T/O Dist. @ Max. T/O Wt. War-Time 6,750 ft

\* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 133.8 k-lb Max. Ldg. Wt. 138.9 k-lb

\* Min. Ldg. Dist. @ Min. Ldg. Wt. †

\* Min. Ldg. Dist. @ Max. Ldg. Wt. 4,900 ft

\* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	High <u>A</u>	Medium <u>B</u>	Low <u>C</u>	Ultra Low <u>D</u>	High <u>A</u>	Medium <u>B</u>	Low <u>C</u>	Very Low <u>D</u>

Note: Adequate aircraft data is not available to express the relative structural effect of the aircraft.

Figure A-458. Airbus A320

ETL 1110-3-394

27 Sep 91

Aircraft Manufacturer British Aerospace and Aerospatiale (SNIAS)

Aircraft Engine Manufacturer Rolls-Royce/SNECMA (Olympus 593 MK 610)

No. of Engines 4 Engine Rating 38,000 lb

Min. T/O Wt. 209.4 k-lb \* Min. T/O Dist. @ Min. T/O Wt. 5,900 ft

\* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †

Max. T/O Wt. Peace-Time 408.0 k-lb Max. T/O Wt. War-Time 408.0 k-lb

\* Min. T/O Dist. @ Max. T/O Wt. War-Time 10,800 ft

\* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †

Min. Ldg. Wt. 205.0 k-lb Max. Ldg. Wt. 245.0 k-lb

\* Min. Ldg. Dist. @ Min. Ldg. Wt. 5,600 ft

\* Min. Ldg. Dist. @ Max. Ldg. Wt. 6,600 ft

\* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	Ultra		Very		High A	Medium B	Low C	Low D
	High A	Medium B	Low C	Low D				
205	26	29	33	38	27	29	33	41
245	33	37	43	48	34	37	43	52
408	61	71	82	91	65	72	81	98

Figure A-459. B.A.C./SNIAS Concorde

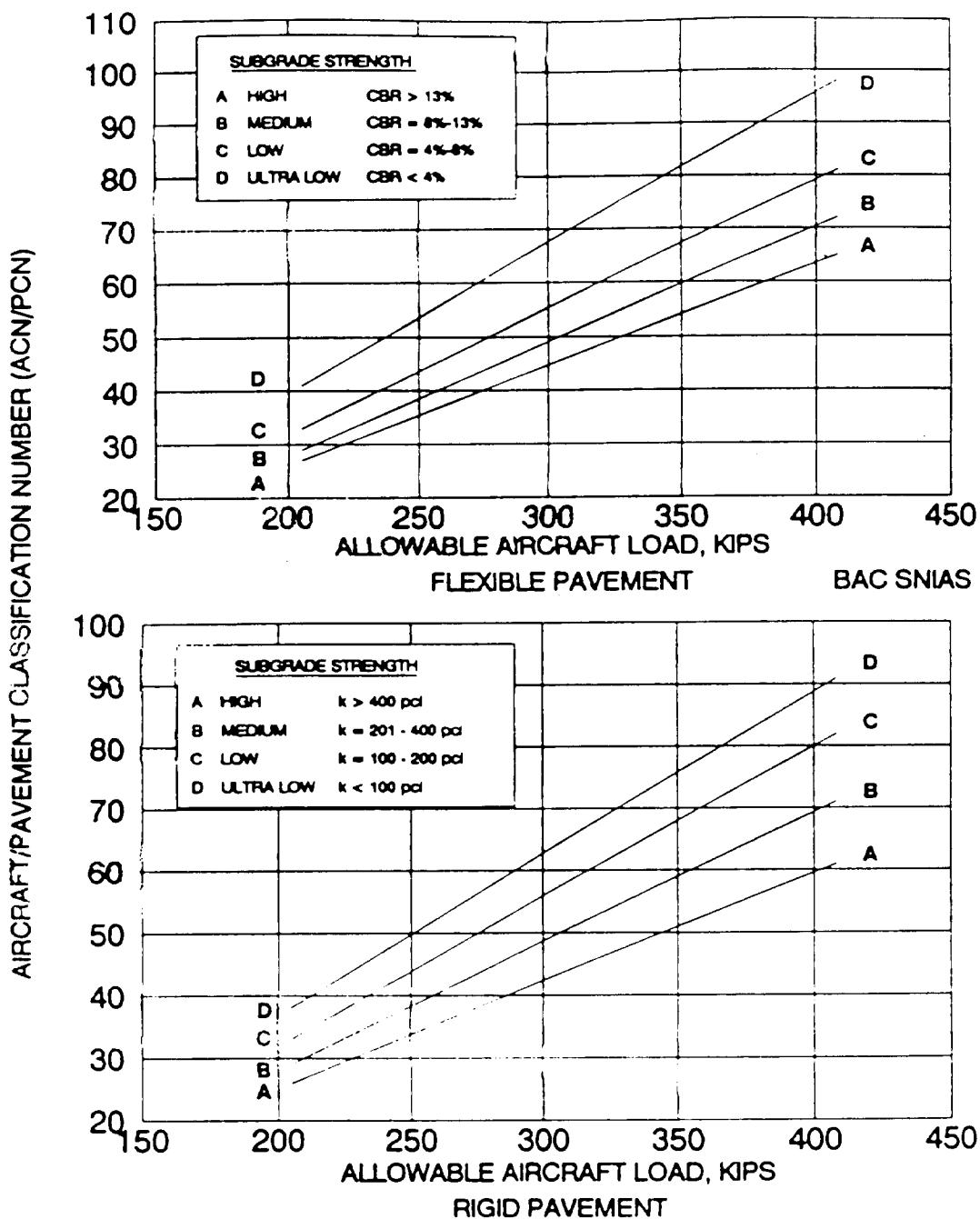


Figure A-460. B.A.C./SNIAS Concorde, ACN/PCN Curves

27 Sep 91

Aircraft Manufacturer British AerospaceAircraft Engine Manufacturer Avco Lycoming (ALF 502R-5)No. of Engines 4 Engine Rating 6,970 lbMin. T/O Wt. 55.1 k-lb \* Min. T/O Dist. @ Min. T/O Wt. †\* Min. T/O Dist. @ Min. T/O Wt. With Abort Dist. †Max. T/O Wt. Peace-Time 84.0 k-lb Max. T/O Wt. War-Time 84.0 k-lb\* Min. T/O Dist. @ Max. T/O Wt. War-Time 4,000 ft\* Min. T/O Dist. @ Max. T/O Wt. War-Time With Abort Dist. †Min. Ldg. Wt. 70.5 k-lb Max. Ldg. Wt. 77.5 k-lb\* Min. Ldg. Dist. @ Min. Ldg. Wt. †\* Min. Ldg. Dist. @ Max. Ldg. Wt. 3,500 ft

\* These distances are at 59°F, at sea level, with zero runway gradient, and on a clean dry runway surface.

## ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	High A	Medium B	Low C	Low D	High A	Medium B	Low C	Very Low D

Note: Adequate aircraft data is not available to express the relative structural effect of the aircraft.

Figure A-461. British Aerospace 146-Model 100